Draft Memorandum

August 27, 1998

To: State Representatives, Attendees of July 29 Roundtable Meeting

From: Jim O'Leary, U.S. Environmental Protection Agency, Office of Solid Waste

Subject: Summary of July 29, 1998 Meeting of State Agency Officials Regarding Solvent-Contaminated Shop Towels and Wipes and the Status of EPA Regulatory Efforts

Once again, thank you for your participation and valuable input during our meeting. The following provides a summary of our discussions during the meeting of July 29, 1998, particularly with respect to your reactions and input to EPA's preliminary regulatory options for addressing potential concerns regarding the management of solvent-contaminated wipes, towels, and rags. Once you have had a chance to read through this summary, we would appreciate any additional feedback you can provide to further refine our current options, as well as any additional information and/or data that you may have regarding your state programs and/or the predominate management practices employed by generators in your state. Upon receipt and review of any comments, we (EPA/OSW) intend to revise the meeting summary and distribute a summary document to additional state agencies that were not in attendance for further review and input.

Discussion of EPA's Preliminary Regulatory Options

After a short review of the pertinent issues and concerns and an overview of EPA's current policies and regulations, as well as your state regulatory programs, we (EPA) presented an overview of EPA's two preliminary regulatory options. One preliminary option included performance-based standards (Option 1), the other included a risk-based standard (Option 2). As we mentioned during the meeting, the Agency's preliminary options were not intended to be mutually exclusive and the components of both options potentially could be combined. In the case of both regulatory options, contaminated shop towels, wipes, and rags would be exempt from hazardous waste regulation provided they are managed in compliance with specific management standards.

Under Option 1, industrial shop towels, wipes, and rags contaminated with a listed hazardous waste solvent would be exempt from regulation as a hazardous waste if, when transferred off-site to an industrial laundry subject to Clean Water Act (CWA) authority or to a municipal waste combustor in compliance with the New Performance Standards and Emission Guidelines, the solvent portion of the weight of the materials is no greater than "X percent" of the total weight of the materials. In addition, if solvent-contaminated materials are sent off-site for management in a municipal solid waste landfill (MSWLF), the amount of solvent contained in the rags, wipes, or

towels could not exceed an average of "Y grams" per day. Under this option (Option 1), all solvent-contaminated materials must be stored on-site in closed containers and generators would be required to certify or document compliance with the specified performance standards. Compliance would most likely require either centrifuging, as the generator may be required to remove large percentages of solvent from the wipe, or require that only small amounts of solvent be used on each wipe.

Our second preliminary regulatory option, Option 2, included two components (Options 2a and 2b). Under Option 2, industrial shop towels, wipes, or rags contaminated with a listed hazardous waste solvent would be exempt from management as a hazardous waste, provided that generators comply with specified compliance conditions that would be dependent upon the intended off-site disposition or management of the spent materials. Option 2a included specific conditions for the management of contaminated towels or wipes that are sent to, or "recycled" at, an industrial laundry subject to CWA authority (i.e., permitted by a POTW) or a municipal waste combustor subject to New Source Performance Standards and Emission Guidelines. The compliance conditions for Option 2a included storage of the materials in closed containers from cradle to grave. In addition, generators would be required to meet a "no free liquids" standard prior to sending the materials off-site. The "no free liquids" standard would have to be demonstrated by taking a random sample of towels or wipes from various levels within the container immediately before shipping the materials off-site. To meet the "no free liquids" requirement, the samples could be "tested" by squeezing, wringing, or applying the Paint Filter Test.

The second component of Option 2, Option 2b, included an exemption from subtitle C management for industrial wipes or rags contaminated with a listed hazardous waste solvent when sent to a MSWLF. These materials would be exempt from hazardous waste management requirements, if the amount of listed solvent contained in the wipes or rages does not exceed an average of "Y grams" per day.

After our initial presentation of the Agency's preliminary regulatory options, the group discussed possible ways in which these regulatory options could be adapted or changed to better reflect the group's combined objectives. During our subsequent discussion, each state representative provided his or her initial reactions to the preliminary options, identified potential issues of concern and offered potential changes and improvements. The most significant issues that were raised and discussed by the group included:

- Potential complications with the need for generators to calculate "X" (percent of total weight of materials that is solvents) and/or calculate "Y" (average daily allowable amount of solvent in contaminated materials).

- The need to avoid defining (and therefore regulating) solvent extraction procedures performed by generators as "treatment" under RCRA.

- Clarification of the "no free liquids" standard.

- The need to establish container standards.

- The potential applicability to solvent-contaminated wipes of standards similar to the current conditional exclusion for spent used oil filters.

- The potential for any proposed management standards to overlap current generator requirements under other regulations or statutes.

- The preference to discourage disposal or landfilling of contaminated materials.

- Potential regulation of industrial laundries under RCRA.

- The need to clarify whether or not the generation of solvent-contaminated wipes, towels and rags should count toward the quantity of hazardous wastes generated when generators determine their RCRA regulatory status.

- The addition of solvent-contaminated wipes, towels, and wipers to the scope of the Universal Waste Rule (40 CFR Part 273).

In addition, the group briefly discussed the need for any proposed regulation to clarify the RCRA regulatory status of solvent-contaminated wipes, shop towels, and rags. Several participants pointed out that EPA must be clear as to whether the regulations were "exempting" the materials from the Subtitle C management standards or "excluding" the rags from RCRA regulation. In particular, a few state representatives stated that it is important that EPA provide a regulatory exclusion from the definition of solid waste if it is the Agency's intention to allow disposal wipes or rags to be disposed in municipal solid waste landfills, under certain conditions. Many municipal landfills will not accept any hazardous wastes, even those that may qualify for a conditional exclusion from subtitle C management. If EPA were to exempt the materials from regulation as hazardous wastes, they may, in effect, limit the ability of municipal solid waste facilities to receive the wipes because they technically meet the definition of a hazardous waste (even though they are not required to be managed in accordance with the subtitle C standards).

The following provides a short summary of the group's discussion regarding each of the major issues raised (those listed above) during the meeting.

The calculation of "X" and "Y" will be overly burdensome for generators.

The most prevalent opinion expressed by members of the group was that regulatory Option 1 is too complicated for generators to successfully implement. Several participants stated that the calculations of "X" and "Y" will be an onerous task for small generators and possibly even an impossible task, given the potential for wide variability in the use of wipes and solvents at a given facility. State representatives pointed out that the calculation of "X" (the percent of the total weight of solvent-contaminated wipes that is solvents) may only be sufficiently understood and implemented by large generators and businesses that have a sophisticated understanding of RCRA and standardized processes.

Solvent extraction should not be regulated treatment.

State representatives agreed that any proposed regulation should require that generators remove free liquids from shop towels, rags, and wipes prior to sending the materials off-site for recycling or disposal. In addition, a consensus was reached that any methods used by generators to remove free liquids should not be defined as regulated treatment under RCRA. EPA's Office of General Council is currently reviewing OSW's options regarding the regulatory status of solvent extraction procedures for rags and is considering the potential for determining that wringing, centrifuging, and other processes used for extracting solvents from spent wipes, towels or rags are part of the waste generation process and not "treatment." Many participants suggested that EPA acknowledge that solvent extraction methods, such as wringing, are forms of treatment; however, they should be considered unregulated methods of treatment and exempt from RCRA permitting. State representatives referenced their own state policies where wringing or centrifuging is defined as a necessary, or primary, step in a recycling process. In addition, some state representatives pointed out that the current federal RCRA regulations allow generators to treat their wastes in accumulation tanks or containers, provided the tanks or containers are in compliance with applicable technical standards (i.e., 40 CFR Part 265, Subparts I and J). One state representative indicated that under his state's policy wringing of solvent-contaminated towels and wipes is considered to be a step in the waste generation process, and occurs prior to the designation of the material as a waste. Another state representative commented that EPA has never clarified whether or not treatment of a hazardous waste in a "dedicated treatment unit" at a generator site (e.g., centrifuging) qualifies for the generator treatment allowance.

The definition of no free liquids must be clarified.

State representatives commented that both of the current regulatory options hinge upon the concept of removing free liquids from the wipes. They acknowledged that state agencies have varying positions on the best way to define a "no free liquids" standard (e.g., wringing, Paint Filter Test) and requested that EPA clearly define, within the context of any regulation, how the standard can be achieved. Many attendees suggested that the Paint Filter Test not be used and that EPA should focus on creating a process driven definition of no free liquids.

Among the alternatives suggested for "testing" solvent-contaminated wipes, towels, and rags for compliance with a "no free liquids" standard were the liquids release test (although it was pointed out that this test requires hardware, a hood, and some skill on the part of the employee applying the test); a general performance standard stating that there should be "no visible liquid phase on the bottom of a container at the time of shipment;" a requirement for all wipes, towels and rags to be hand wrung or squeezed prior to shipment off-site; a requirement that some form of mechanical wringing be conducted and that the standard be met at the time of shipment; a requirement that wipes, towels, and rags be wrung twice, once prior to being placed in a container and again prior to shipment off-site; application of a "one drop" test; and a container specification (e.g., require storage in screen bottom drums).

Identify container management standards for accumulating wipes and shop towels.

All of the state representatives agreed that while contaminated materials are accumulated and stored at the generation site or transported off-site, the wipes and rags should remain in closed containers. Some participants indicated that the containers also should be constructed so that they are fire proof or fire resistant to protect against problems of spontaneous combustion. Others indicated that a requirement that containers meet standards set by the Department of Transportation (DOT) or the National Fire Prevention Association (NFPA) would be sufficient. Attendees also indicated that safe management standards for accumulation units be included in the Agency's proposed regulatory options and that the standards include labeling requirements. Several participants suggested that containers should be labeled with a term other than hazardous waste (e.g., "used wipes") to avoid the potential stigma associated with the handling of hazardous wastes.

Create regulations similar to the exclusion for used oil filters (40 CFR §261.4(b)(13)).

Several state representatives suggested that an appropriate regulatory scheme for solvent-contaminated wipes and shop towels could be tailored after the existing conditional exclusion from the definition of hazardous waste for non-terne plated used oil filters. This exclusion is conditioned upon compliance with specific management practices (e.g., hot draining). It was suggested that similar management standards can be created for solvent-contaminated wipes. Such standards may include requiring that wipes and rags contain no free liquids, managing the materials in closed containers, and off-site management at specified facilities.

Identify other regulatory programs and policies which may overlap/contradict EPA regulations.

Some participants questioned whether other environmental standards already address some of the potential risks and concerns associated with the management of solvent-contaminated shop towels and wipes. Specifically, state representatives requested that EPA undertake a comprehensive review of the OSHA, CAA, CWA, and State and Local Fire Codes to determine if there are currently any existing management standards applicable to facilities generating solvent-contaminated shop towels, wipes, and rags that may address potential management concerns. Participants indicated that they did not want the RCRA regulations to duplicate requirements which may be included under other regulatory programs. Some state representatives argued, however, that it is common for regulations to contradict requirements of other programs, thereby making it impossible for facilities to be in full compliance with all regulatory provisions. The participants urged EPA to avoid creating any more potential contradictions among programs when drafting new standards.

Participants also alerted EPA to the fact that individual state regulations may conflict with proposed federal regulations. For example, it was pointed out that the State of Florida's municipal solid waste landfill program includes liner requirements that may not be considered protective enough to allow for the disposal of solvent-contaminated rags. In addition, a few state representatives indicated that their individual environmental climates and conditions may dictate that some management options are more preferable than others, therefore, it would be difficult to implement Federal standards which encourage a specified management path (e.g., landfilling). It

also was pointed out that there are no municipal solid waste combustion facilities in some states (e.g., Georgia), making such management inaccessible to some generators.

Landfilling as a management path for solvent-contaminated wipes.

Several state representatives argued that any new federal regulations should be designed so as not to promote (but, rather to discourage) the disposal of solvent-contaminated shop towels, wipes, and rags in landfills. Different state agencies have different waste minimization policies and hierarchies. However, most participants indicated that generators should be encouraged to manage their materials at industrial laundries or combustion facilities rather than sending them for land disposal. It was pointed out that to meet the philosophical objectives of HSWA, landfilling should be discouraged. One state representative suggested that if disposal in municipal landfills were to be allowed under a new regulatory program, solvent-contaminated wipes destined for disposal in municipal landfills should be required to be treated in accordance with the LDR treatment standards for the specified solvent. After treating to meet the Part 268 requirements, a wipe or rag could then exit subtitle C regulation and be disposed of in either a municipal or hazardous waste landfill. It was pointed out that the application of the LDR treatment standards to solvent-contaminated wipes, towels and rags may be costly for some generators. However, other participants pointed out that the option to landfill solvent-contaminated materials should be regulated more stringently than other, preferred, management options.

Determine if industrial laundries should be further regulated.

Some state representatives indicated that problems attributed to improper management of solvent-contaminated shop towels and wipes at industrial laundries were egregious enough to warrant extending RCRA controls over their activities. Some participants questioned whether industrial laundries could be considered RCRA generators due to their solvent removal activities. Other state representatives suggested that EPA promulgate best management practices specifically for industrial laundries managing solvent-contaminated wipes and shop towels.

Clarify application of the generator waste quantity determination requirements.

Many participants indicated that their state policies do not require generators to count contaminated rags and wipes toward their monthly generation amount for determining regulatory status, while other state representatives indicated that their state programs do require generators to count contaminated shop towels, wipes, and rags toward their hazardous waste generation quantity for determining regulatory status. Most participants indicated that the issue of counting may be dependent upon how EPA chooses to design the regulations (i.e., either as an "exclusion" or an "exemption"). However, the majority of participants agreed that EPA should not require generators to count these materials toward their hazardous waste generation quantity for determining regulatory status. A few state representatives expressed concern that excluding such materials from the hazardous waste quantity determination could handicap EPA's data collection abilities, while others indicated that requiring counting may unnecessarily change many Small Quantity Generators' (SQG) regulatory status to Large Quantity Generator (LQG).

Some participants suggested that EPA develop a tiered regulatory approach. Such an approach could include different sets of management standards that would apply to different generators, based upon generator size, or the quantity of hazardous wastes generated.

Identify solvents which may not need to be covered under the scope of the regulation.

One state representative suggested that some wipes, shop towels and rags that are contaminated with particular listed solvents should be excluded from RCRA regulations. Specifically, it was pointed out that some types of solvents, particularly those that are listed because they exhibit the characteristic of ignitability (e.g., those fitting the F003 listing) may not need to be included within the scope of a regulatory program for solvent-contaminated wipes, towels and rags.

Applicability of Universal Waste program.

Some participants suggested that EPA consider including solvent-contaminated shop towels, wipes, and rags within the scope of the universal waste regulations. EPA has reviewed the possibility of designating contaminated towels and wipes as universal waste but, at this time the Agency believes that such a designation would be inappropriate. By including contaminated rags in the universal waste program, they would be considered hazardous wastes and would be required to be managed at destination facilities which are subject to full subtitle C regulation. It is not EPA's intent at this time to regulate solvent-contaminated shop towels, wipes, and rags as hazardous wastes, nor to require industrial laundries to obtain RCRA permits for their management (e.g., storage) activities.

Desired Outcomes

Discussion related to the Agency's proposed regulatory options by the attending state agency representatives led to the identification of several desired outcomes on which the group recommended that EPA focus when drafting proposed regulations for solvent-contaminated wipes, shop towels, and rags. Participants suggested that EPA set an objective of designing management standards that are easy to understand and relatively simple to implement for all generators. Participants felt that the regulations should be designed to encourage compliance, be environmentally protective and practical, and clearly identify the point at which the solvent-contaminated materials "exit" RCRA jurisdiction. Other suggestions offered by the group as desired outcomes or objectives for a new rulemaking included specifying a preferred management path (i.e., recycling, combustion, or landfilling) and designing the regulations to encourage preferred management options (e.g., promoting "recycling/reuse" over disposal).

How to Achieve Desired Outcomes

The majority of the participants suggested that EPA build its proposed rulemaking using preliminary Option 2a as a foundation. The following recommendations were provided by the group as necessary provisions of, and potential enhancements to, the current option:

require that wipes, towels, and rags contain no free liquids prior to being sent off-site by generators;

require generators to manage materials in closed containers which are labeled (with words other than "hazardous waste");

promote the use of higher end (i.e., more efficient) solvent removal technologies (e.g., centrifuging, mechanical wringing);

investigate the potential for allowing generators to perform solvent extraction without defining such procedures as regulated treatment; and

do not require solvent contaminated wipes, towels and rags that are managed in accordance with regulatory conditions to be counted towards a generator's monthly regulatory status.

Additional Issues Potentially Associated With Achieving Outcomes

After discussing the suggested "desired outcomes" for a federal regulatory program and possible ways to achieve such outcomes, participants identified potential issues associated with the development and implementation of such a program and, in some cases, re-stated the potential problem areas associated with the current regulatory options. The issues that were discussed include:

Defining at which point solvent-contaminated shop towels, wipes, and rags will exit subtitle C regulation, or RCRA jurisdiction.

Determining the most appropriate way to define a "no free liquids" standard to promote the use of efficient solvent extraction methods, such as mechanical wringing and centrifuging; and if it is determined that, under the current regulatory structure that such actions constitute treatment, determine how to exempt such treatment from RCRA permitting requirements.

Establishing clear guidelines for complying with a "no free liquids" standard that does not include the use of the Paint Filter Test and that are based on specified processes, such as centrifuging.

Subjecting wipes and rags destined for disposal to the existing Land Disposal Restriction treatment standards for the applicable solvents as a basis for discouraging the disposal of solvent-contaminated wipes and rags in landfills.

Assessing the effectiveness of other environmental and occupational health standards to determine the scope and extent of existing regulations which place management controls on solvent-contaminated rags and wipes and to prevent additional overlap between regulatory programs.

Evaluating the probability that solvent-contaminated rags and wipes may exhibit a hazardous waste characteristic due to the presence of additional "non-solvent" contaminants picked up during use.

What States Should Do in the Meantime

Participants commented that the wide variability among different state policies makes it difficult to implement and enforce effective management standards for contaminated shop towels, wipes, and rags. Man state representatives indicated the need for unified standards at the national level, either in the form of regulations or a policy letter to promote consistency of regulatory programs across state boundaries. Some participants urged EPA to produce a policy memorandum citing centrifuging as the preferred method for meeting the "no free liquids" standard. Other state representatives indicated that EPA should develop and promote a set of best management practices which could act as interim guidance to state officials and generators prior to finalizing federal regulations. Many participants requested that EPA identify and incorporate references to other applicable environmental standards (i.e., OSHA, CWA) in any guidance that is created.

EPA is evaluating the possibility of issuing interim guidance. The Agency's current schedule calls for the publication of a proposed rule by early 1999. As the Agency evaluates the merits of developing interim guidance, state agencies should be sensitizing their staff members to the problems of free liquids being sent off-site to industrial laundries.

Potential Data Gaps

Participants identified areas in which EPA may wish to undertake further study before preceding with the development of proposed regulatory options. Potential data gaps that the Agency may need to address in the near term are discussed below.

Identify and evaluate potential concerns regarding additional generator categories and potential contaminants in towels, wipes, and rags.

Some participants indicated that there are other categories of generators that generate significant quantities of solvent-contaminated rags in addition to those categories of generators already identified. Some state representatives cited examples of large-scale generation of solvent-contaminated (and/or otherwise contaminated) shop towels and wipes at hospitals and universities. The participants indicated that such facilities are typically not aware of the appropriate management standards for these wastes and are subsequently improperly handling the materials. It was suggested that EPA further evaluate the generation activities at such non-traditional facilities.

Another issue identified by state representatives was the application of any regulations to solvent-contaminated materials other than wipes, towels, and rags (e.g., swatches, q-tips, personal protective equipment (PPE)). It was suggested by some participants that EPA conduct a further investigation to potentially include such materials within the scope of the regulations. It was argued that such materials should be handled in the same manner as contaminated wipes because they are used in similar applications as wipes and often contaminated with the same solvents.

Potential for wipes to exhibit hazardous characteristics from co-contaminants.

Several state representatives expressed concern that the current regulatory options may not effectively regulate solvent-contaminated wipes that may exhibit a hazardous waste characteristic due to the presence of non-solvent co-contaminants (i.e., TC metals), obtained through use. Many participants indicated that metal cleaning industries predominantly generate wipes that may fail the TCLP for metals. Any future regulations should be carefully worded as not to allow wipes which exhibit a hazardous characteristic due to the presence of metals to exit subtitle C regulation merely because the materials meet a "no free liquids" standard.

Determine circumstances where wipes would not meet a "no free liquids" standard.

Participants stated that it would be beneficial for small businesses if EPA could determine a bright-line level for compliance with the "no free liquids" standard. Participants suggested that EPA conduct further testing to determine when, or under what circumstances, generators potentially may not meet the "no free liquids" standard (i.e., under what general practices or circumstances is there a high probability that significant quantities of solvents remain in towels, wipes, or rags). The results of such investigations should then be summarized in guidance to assist generators in developing cost-effective procedures for complying with a "no-free liquids"

standard.

Evaluate whether centrifuging meets the LDR treatment standards for listed solvents.

State representatives also suggested that EPA conduct further testing to determine the removal efficiency of centrifuging for F-listed solvents. The removal rates should be compared to the established LDR treatment standards for the individual solvent constituents to determine if centrifuging is equivalent to the Best Demonstrated Available Technology (BDAT) on which the treatment standards are based.

Next Steps

At the end of the meeting we discussed how we could set up a process for attaining continued input from state representatives throughout the regulatory development process. We (EPA) expressed our intention of providing you (the state representatives) with this meeting summary within a week or so of our meeting and requesting your comment on this summary by the end of August. We will then explore options for including you in the formal regulatory development process, either by working through ASTWMO, or through future conference calls. We also discussed potentially working with industry trade associations to obtain their input and comment on potential regulatory options.

We will be holding a meeting with small business interests on August 10 as part of the Agency's obligations under the Small Business Regulatory Enforcement Fairness Act (SBREFA). It is the Agency's intention to develop a draft proposed rulemaking package and initiate the Agency's regulatory workgroup process by the end of September. Other activities that we may pursue in the meantime include additional studies to evaluate the effectiveness of various solvent extraction processes, additional site visits, and an evaluation of the need for additional guidance.